Lockheed Martin Corporation
Corporate Environment, Safety & Health
West Coast Projects Office
2550 North Hollywood Way, 3rd Floor, Burbank, CA 91505-1055
Facsimile 818-847-0256 or 818-847-0170

LOCKHEED MARTIN

Via Courier
RED0500/051
WBS #48

May 25, 2000

Mr. Gerard J. Thibeault
Executive Officer
California Regional Water Quality Control Board
Santa Ana Region
3737 Main Street, Suite 500
Riverside, California 92501-3339

Dear Mr. Thibeault:

Subject: **March 2000 Data Report**
Water Supply Contingency Plan
Production Well Sampling Program
Crafton-Redlands Plume Project

In compliance with the approved Water Supply Contingency Plan, enclosed please find one copy of the **March 2000 Production Well Sampling Program** report prepared by HSI Geotrans for Lockheed Martin Corporation. This report presents analytical results from samples collected at Bunker Hill Basin Production Wells in March of 2000. Laboratory Quality Assurance/Quality Control documentation is included in Attachment B of the report.

Should you have any comments or requests, please contact me at (818) 847-0791.

Sincerely,

Thomas D. Blackman
Technical Project Manager

TDB:eah:mg

Enclosures

cc: See Attached Distribution List

Distribution

cc: (Abbreviated Report Without Attachments "A & B" Which are Available Upon Request)

Kim Alexander, Psomas Engineering
Chris Bahnsen, San Bernardino Valley Water Conservation District
Kalyanpur Baliga, Department of Health Services (San Bernardino)
Tom Crowley, San Bernardino Valley Water Conservation District
Henry Dennis, Mountain View Power Co.
Dodie Farmer, Victoria Farms Mutual Water Company
Douglas Hedrick, City of Redlands
Ross Lewis, Gage Canal Company
Kevin Mayer, US EPA (Region IX)
Steve Mains, Western Municipal Water District
Morris Matson, Loma Linda University
Eugene McMeans, Riverside Highland Water Company
Zahra Panahi, City of Riverside
Dan Randall, City of Riverside
Bob Reiter, San Bernardino Valley Municipal Water District
Toby Roy, Department of Health Services (San Diego)
Jon Satrom, USAF, Norton Air Force Base
Alain Sharp, Earth Technology Corporation
Greg Snyder, City of Loma Linda
Joseph Stejskal, City of San Bernardino
Dieter Wirtzfeld, City of Riverside

HSI
GEOTRANS
A TETRA TECH COMPANY

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92614

949-253-2958 FAX 949-250-6776

May 31, 2000

Lockheed Martin Corporation
West Coast Project Office
2550 N. Hollywood Way, 3rd Floor
Burbank, California 91505

Attention: Mr. Eric Hodder
Project Supervisor

Subject: March 2000 Data Report
Water Supply Contingency Plan
Production Well Sampling Program
Crafton-Redlands Plume Project

Dear Mr. Hodder:

This report presents a summary of results of the Water Supply Contingency Plan production well sampling for the month of March 2000. The Water Supply Contingency Plan (WSCP) was prepared by Lockheed Martin Corporation and submitted to the State of California Regional Water Quality Control Board (RWQCB) Santa Ana Region on September 30, 1996. The plan was conditionally approved by the RWQCB in a letter dated March 6, 1997. The WSCP for the Crafton-Redlands Plume was prepared to address maintenance of water supply to purveyors in the event that wells became impacted with trichloroethene (TCE) from the Crafton-Redlands TCE Plume. A summary of key dates and WSCP sampling program evolution is provided on Table 1.

The locations of the WSCP wells and analytical results for the March 2000 sampling event for TCE and perchlorate are shown on Figures 1 and 2, respectively. Table 2 presents a summary of analytical tests performed on each WSCP well and water system sampling point. The sampling frequency of each well is once a month for the first year. An alternate frequency, if required, is based on the analytical results as outlined in the WSCP TCE and perchlorate decision matrices, provided as Figures 3 and 4, respectively. The perchlorate decision matrix was presented in the *Perchlorate Work Plan and Schedule*, which was submitted, to the RWQCB on August 15, 1997. The RWQCB approved the

Perchlorate Work Plan on October 31, 1997. Table 3 presents a summary of the wells sampled twice monthly according to the decision matrices.

RESULTS

A summary of the analytical results for the March 2000 WSCP sampling event for TCE and perchlorate is shown on Figures 1 and 2, respectively, and presented on Table 4. Available groundwater elevation data is provided on Table 5. The water sampling field forms are provided in Attachment A. Chain-of-custody, laboratory data sheets, and Level III Modified laboratory quality assurance/quality control (QA/QC) documentation is provided in Attachment B.

Trichloroethene

Four groundwater samples collected in March met or exceeded 2/5th the MCL for TCE (2.0 µg/L) including: COLL Mountain View #2 (2.7 µg/L), Gage 26-1 (6.2 µg/L), Gage 27-1 (5.8 µg/L), and Gage 29-2 (4.8 µg/L). Water from COLL Mountain View #2 was not pumped into the system and therefore a confirmation sample was not collected.

The TCE observed at Gage 26-1 and Gage 27-1 is partially attributed to the Norton Air Force Base (AFB) Plume and partially attributed to the Crafton Redlands Plume. Gage 26-1 and Gage 27-1 are equipped for TCE treatment, and therefore are not sampled twice a month. The samples collected from these wells are prior to treatment.

The TCE observed at Gage 29-2 and Gage 29-3 is partially attributed to the Norton AFB Plume and partially attributed to the Crafton Redlands Plume, thus Gage 29-2 and Gage 29-3 are sampled twice a month for TCE when active. In March, Gage 29-2 was off-line part of the month; thus, this well was only sampled once. Gage 29-3 was off-line during March and thus, was not sampled. Water sampled from these wells is untreated.

The COLL Richardson Blend sampling point was not sampled in March because during the month of March, only the Richardson #3 well was pumping into the Richardson system. Thus, sampling of Richardson Blend was considered redundant.

Perchlorate

Groundwater samples collected from three wells in March met or exceeded 75 percent (13.5 µg/L) of the PAL for perchlorate including: COLL Mountain View #2 (44 µg/L), COLL Richardson #1 (14 µg/L), and Gage 29-2 (36 µg/L). Water from COLL Mountain View #2 and COLL Richardson #1 was not pumped into the system and therefore confirmation samples were not collected.

Gage 29-2, Gage 29-3, Gage 51-1, Gage 92-1 and COLL Mountain View #2 wells are currently scheduled for sampling on a twice a month basis for perchlorate, if active. Gage 29-3, Gage 51-1, and Gage 92-1 were off-line in March and thus were not sampled. Gage 29-2 was off-line during part of March; thus, this well was sampled only once.

The perchlorate impacts observed at COLL Mountain View #2 are consistent with historic data when the well has been idle and sampled shortly after the pump has turned on. The perchlorate impacts observed at Richardson #1 are a result of cross-flow between hydrostratigraphic units through Richardson #2. The Richardson #2 well was abandoned (San Bernardino County permitted well destruction) in February 2000. Richardson #1 has not been pumped for water supply since the Richardson #2 well was abandoned.

TWICE-MONTHLY SAMPLING EVALUATION

In accordance with the TCE and perchlorate decision matrices provided as Figures 3 and 4, respectively, an evaluation is made every three months on the wells sampled on a twice-monthly basis. If the average TCE concentration in a well over the three month period is less than 2/5th of the MCL (2.0 µg/L) the well will be sampled once a month for TCE. Similarly, if the average perchlorate concentration in a well over the three month period is less than 75 percent of the PAL (13.5 µg/L) the well will be sampled once a month for perchlorate.

A summary of the three-month sampling cycle for TCE and perchlorate from January 2000 through March 2000 is provided below.

Trichloroethene

As of March 31, 2000, two wells (Gage 29-2 and Gage 29-3) are sampled for TCE on a twice a month basis, if active. As mentioned in the Results Section, Gage 29-2 and Gage 29-3 are equipped for TCE treatment. For the past three months (January 1 through March 31, 2000), the average TCE concentration for the wells sampled on a twice-monthly basis is presented on Table 6.

One sample was collected from Gage 29-2 during the January 1 through March 31, 2000 sampling cycle because the well was off-line for most of the three month sampling cycle. The TCE concentration for the one sample collected from Gage 29-2 is 4.8 µg/L (Table 6). This exceeds 2/5th the MCL for TCE (2.0 µg/L), thus, Gage 29-2 will continue to be sampled on a twice-monthly basis, if active.

No samples were collected from Gage 29-3 during the January 1 through March 31, 2000 three-month sampling cycle because the well was off-line. Gage 29-3 will continue to be sampled on a twice-monthly basis, if active.

Twice-monthly sampling for TCE will continue for Gage 29-2 and Gage 29-3. At the conclusion of the next three month sampling cycle (June 30, 2000), the TCE concentrations in Gage 29-2 and Gage 29-3 will be evaluated to determine the future sampling frequency.

Perchlorate

As of March 31, 2000, five wells (Gage 29-2, Gage 29-3, Gage 51-1, Gage 92-1, and COLL Mountain View #2) are sampled on a twice a month basis, if active. For the past three months (January 1 through March 31, 2000), the average perchlorate concentrations for the wells sampled on a twice-monthly basis are presented on Table 6.

One sample was collected from Gage 29-2 during the January 1 through March 31, 2000 sampling cycle because the well was off-line most of the time. The perchlorate concentration for the one sample collected from Gage 29-2 is 36 µg/L (Table 6). This exceeds 75 percent of the perchlorate PAL, thus, Gage 29-2 will continue to be sampled on a twice-monthly basis, if active.

No samples were collected from Gage 29-3 and Gage 51-1 during the January 1 through March 31, 2000 three-month sampling cycle because the wells were off-line. Gage 29-3 and Gage 51-1 will continue to be sampled on a twice-monthly basis, if active.

Three samples were collected from Gage 92-1 during the January 1 through March 31, 2000 three-month sampling cycle. The average perchlorate concentration for the collected samples is 18 µg/L (Table 6) thus, Gage 92-1 will continue to be sampled on a twice-monthly basis, if active.

Five samples were collected from the COLL Mountain View #2 between January 1 and 31, 1999. The average perchlorate concentration for the collected samples is 44 µg/L (Table 6) thus, COLL Mountain View #2 will continue to be sampled on a twice-monthly basis, if active.

Twice-monthly sampling for perchlorate will continue for Gage 29-2, Gage 29-3, Gage 51-1, Gage 92-1, and COLL Mountain View #2. At the conclusion of the next three month sampling cycle (June 30, 2000), the perchlorate concentrations in Gage 29-2, Gage 29-3, Gage 51-1, Gage 92-1, and COLL Mountain View #2 will be evaluated to determine the future sampling frequency.

CLOSING

HSI GeoTrans greatly appreciates being of continued service to Lockheed Martin Corporation on this project. Should you have any questions or comments, please do not hesitate to call.

Sincerely,
HSI GEOTRANS

Roy J. Marroquin
Project Manager

James C. Norman, R.G., C.HG.
Project Director

TABLES

TABLE 1

KEY PROJECT DATES AND WSCP SAMPLING PROGRAM EVOLUTION

August 2, 1996, the RWQCB – Santa Ana Region requested Lockheed Martin to submit a conceptual Water Supply Contingency Plan.
September 30, 1996, Lockheed Martin submitted the Water Supply Contingency Plan (WSCP) to the RWQCB – Santa Ana Region.
March 6, 1997, the RWQCB conditionally approved the WSCP, which included sampling eight production wells (City of Loma Linda Richardson #1, Richardson #2, Mountain View #1, Mountain View #2, Victoria Farms Mutual Water Company Wells #1 and #3, and Southern California Edison #1 and #2).
June 1997, Victoria Farms Mutual Water Company was connected to City of San Bernardino Water. Pumping ceased at VFMWC #1 and #3, and the two wells were removed from the program.
June 1997, sampling of SCE #1 was discontinued because it is not operated on a regular basis. The WSCP consists of five wells, including COLL Mountain View #1 and #2, COLL Richardson #1 and #2, and SCE #2 (AUX).
August 1997, the WSCP was expanded due to the detection of perchlorate in municipal supply wells in the Bunker Hill Basin. Twenty-six wells were added to the WSCP including nineteen City of Riverside wells, five City of Redlands wells, and two Loma Linda University wells, for a total of 31 wells.
October 1997, three City of Riverside water system sampling points were added to the WSCP, including the Gage system pipeline (Gage Delivery), the Waterman system pipeline (Iowa Booster), and the sampling station measuring outflow from the Linden and Evans Reservoirs (7^{th} & Chicago).
March 1998, two City of Loma Linda water system sampling points were added to the WSCP, including the Mountain View system pipeline (Mountain View Blend at Lawton) and the Richardson system pipeline (Richardson Blend).
June 1998, one City of Riverside irrigation water system sampling point (Gage Arlington) and one additional City of Loma Linda water system sampling point (Mountain View Blend at Timoteo) were added to the WSCP.
December 1998, the COLL Richardson #3 well was added to the WSCP Sampling Program.
May 1999, Sampling of Mountain View Blend at Timoteo was discontinued because it does not represent a blend sample of the Mountain View pipeline system.
December 1999, the COLL Mountain View #3 well and the Gage 98-1 well were added to the WSCP Sampling Program.

TABLE 2

WSCP PRODUCTION WELL SAMPLING PROGRAM

HSI#	Well Name	Perchlorate	TCE
City of Loma Linda			
692	Mountain View #2	X	X
3106	Mountain View #3	X	X
693	Richardson #1	X	X
707	Richardson #3	X	X
City of Loma Linda Water System Sampling Points			
2967	Mountain View Blend - Lawton	X	X
2968	Richardson Blend	X	X
Southern California Edison			
554	SCE#2(AUX)	X	X
Loma Linda University			
267	LLUniv Anderson #2	X	
717	LLUniv Anderson #3	X	
City of Riverside (Gage System)			
252	Gage#26-1	X	X
258	Gage#27-1	X	X
259	Gage#27-2	X	X
260	Gage#29-1	X	X
219	Gage#29-2	X	X
220	Gage#29-3	X	X
218	Gage#30-1	X	X
214	Gage#31-1	X	X
215	Gage#46-1	X	X
253	Gage#51-1	X	X
216	Gage#56-1	X	X
257	Gage#66-1	X	X
644	Gage#92-1	X	X
641	Gage#92-2	X	X
642	Gage#92-3	X	X
3091	Gage#98-1	X	X
City of Riverside (Waterman System)			
273	Hunt#6	X	
271	Hunt#10	X	
272	Hunt#11	X	
City of Riverside Water System Sampling Points			
2946	Iowa Booster (Waterman)	X	X
2947	Gage Delivery (Gage)	X	X
2948	7th & Chicago (Reservoir)	X	X
3018	Gage Arlington	X	
City of Redlands			
542	COR Church St	X	
2673	COR#38	X	
535	COR Mentone Acres	X	
29	COR Orange st	X	
74	CORRees	X	X

Notes:

TCE = Trichloroethene

Perchlorate analyzed using DHS Method (EPA 300.0 Modified)

TCE analyzed using EPA Method 502.2

TABLE 3

WSCP PRODUCTION WELL SAMPLING PROGRAM
MARCH 2000 WELLS SAMPLED TWICE MONTHLY

HSI#	Well Name	Perchlorate	TCE
City of Loma Linda			
692	Mountain View #2	X	
City of Riverside (Gage System)			
219	Gage #29-2	X	X
220	Gage #29-3	X	X
253	Gage #51-1	X	
644	Gage #92-1	X	

Notes:
TCE = Trichloroethene
Perchlorate analyzed using DHS Method (EPA 300.0 Modified).
TCE analyzed using EPA Method 502.2.

TABLE 4
WSCP PRODUCTION WELL SAMPLING PROGRAM
MARCH 2000 DATA RESULTS

HSI#	Well Name	Sample Date	Perchlorate (µg/L) Del Mar	TCE (µg/L) Del Mar
City of Loma Linda				
692	Mountain View #2	3/1/00	44[c]	2.7[c]
692	Mountain View #2*	3/16/00	46[c]	NA
3106	Mountain View #3	3/1/00	ND(4)	ND(0.5)
693	Richardson #1	3/1/00	14[cd]	0.85[cd]
707	Richardson #3	3/1/00	ND(4)	ND(0.5)
City of Loma Linda Water System Sampling Points				
2967	Mountain View Blend-Lawton	3/1/00	ND(4)	ND(0.5)
2968	Richardson Blend	NS	NS	NS
Mountain View Power (Formerly Southern California Edison)				
554	SCE#2(AUX)	3/1/00	ND(4)	ND(0.5)
Loma Linda University				
267	LLUniv Anderson #2	3/1/00	ND(4)	NA
717	LLUniv Anderson #3	3/1/00	ND(4)	NA
City of Riverside (Gage System)				
252	Gage#26-1[b]	3/1/00	11	6.2
258	Gage#27-1[b]	3/1/00	6.4	5.8
259	Gage#27-2	NS	NS	NS
260	Gage#29-1	NS	NS	NS
219	Gage#29-2[b]	3/1/00	36	4.8
219	MUN-770	3/1/00	37	4.9
219	Gage 29-2[b]	NS	NS	NS
220	Gage#29-3[b]	NS	NS	NS
220	Gage#29-3[b]	NS	NS	NS
218	Gage#30-1	NS	NS	NS
214	Gage#31-1	NS	NS	NS
215	Gage#46-1	3/1/00	ND(4)	ND(0.5)
253	Gage#51-1[b]	NS	NS	NS
253	Gage#51-1[b]	NS	NS	NA
216	Gage#56-1	3/1/00	ND(4)	ND(0.5)
257	Gage#66-1	NS	NS	NS
644	Gage#92-1[b]	NS	NS	NS
644	Gage#92-1[b]	3/16/00	16	1.0
641	Gage#92-2	NS	NS	NS
642	Gage#92-3	3/1/00	ND(4)	ND(0.5)
3091	Gage#98-1	NS	NS	NS
City of Riverside (Waterman System)				
273	Hunt#6	NS	NS	NA
271	Hunt#10	NS	NS	NA
272	Hunt#11	NS	NS	NA
City of Riverside Water System Sampling Points				
2946	Iowa Booster (Waterman)	3/1/00	ND(4)	ND(0.5)
2947	Gage Delivery (Gage)	3/1/00	4.8	ND(0.5)
2948	7th & Chicago (Reservoir)	3/1/00	ND(4)	ND(0.5)
3018	Gage Arlington	NS	NS	NA
City of Redlands				
542	COR Church St[a]	NS	NS	NA
2673	COR#38[a]	NS	NS	NA
535	COR Mentone Acres[a]	NS	NS	NA
29	COR Orange St[a]	NS	NS	NA
74	COR Rees	3/1/00	6.2	ND(0.5)

Notes:

* = Twice-monthly sampling result
** = Confirmation sampling results
ND(4) = Not detected at the specified limit
MUN = Duplicate sample collected from the well listed directly above
NA = Not Analyzed
NS = Not Sampled
TCE = Trichloroethene

Perchlorate analyzed using DHS Method (EPA 300.0 Modified)
TCE analyzed using EPA Method 502.2
[a] = Well sampled on quarterly basis, if active
[b] = TCE treatment is installed at this well
[c] = Water purged to waste and not into system
[d] = Concentration in well is a result of cross flow between hydrostratigraphic units

TABLE 5

SUMMARY OF WATER LEVEL MEASUREMENTS
MARCH 2000 SAMPLING EVENT

HSI#	Well Name	Measure Date	Depth to Water	Measuring Point Elevation	Groundwater Elevation	Comments
CITY OF LOMA LINDA						
692	Mountain View #2	03/07/00	116	1085	969	Static
3106	Mountain View #3	03/07/00	90	1086	996	Pumping
693	Richardson #1	03/07/00	102	1077	975	Static
707	Richardson #3	03/07/00	155	1085	930	Pumping
Southern California Edison						
554	SCE#2(AUX)	NM	NM	1100.00	NM	Pumping
Loma Linda University						
267	LLUniv Anderson #2	NM	NM	1075	NM	Pumping
717	LLUniv Anderson #3	NM	NM	1070	NM	Pumping
City of Riverside (Gage System)						
252	Gage#26-1	03/07/00	83.50	1045.33	961.83	Pumping
258	Gage#27-1	03/07/00	81.00	1044.64	963.64	Pumping
259	Gage#27-2	03/07/00	67.30	1044.64	977.34	Static
260	Gage#29-1	03/07/00	67.20	1044.43	977.23	Static
219	Gage#29-2	03/07/00	81.20	1046.31	965.11	Pumping
220	Gage#29-3	03/07/00	65.30	1048.75	983.45	Static
218	Gage#30-1	03/07/00	69.10	1054.17	985.07	Static
214	Gage#31-1	03/07/00	66.00	1054.64	988.64	Static
215	Gage#46-1	03/07/00	71.60	1065.50	993.90	Static
253	Gage#51-1	03/07/00	64.20	1044.64	980.44	Static
216	Gage#56-1	03/07/00	89.10	1065.50	976.40	Static
257	Gage#66-1	03/07/00	65.40	1044.85	979.45	Static
644	Gage#92-1	03/07/00	69.90	1047.78	977.88	Static
641	Gage#92-2	03/07/00	79.40	1053.38	973.98	Static
642	Gage#92-3	03/07/00	134.00	1058.78	924.78	Pumping
3091	Gage#98-1	03/07/00	67.20	1058.78	991.58	Static
City of Riverside (Waterman System)						
273	Hunt#6	NM	NM	1015.5	NM	Pumping
271	Hunt#10	NM	NM	1017	NM	Pumping
272	Hunt#11	NM	NM	1015.7	NM	Pumping
City of Redlands						
542	COR Church St	Mar-00	116.0	1344.8	1228.8	Static
2673	COR#38	Mar-00	65.0	NA	NA	Static
535	COR Mentone Acres	Mar-00	241.0	1506.4	1265.4	Static
29	COR Orange St	Mar-00	110.0	1282	1172.0	Static
74	COR Rees	Mar-00	240.0	1490	1250.0	Pumping

Notes:
All measurements reported in feet below measuring point (ft-bmp)
Water level measurements for all City of Loma Linda, City of Riverside, and City of Redlands wells were obtained by purveyor personnel.
Elevations given in feet above mean sea level (ft-msl)
NM=Not measured
NA=Data not available
Static water levels were allowed to recover a minimum of 30 minutes to obtain a static water level measurement

TABLE 6

TWICE MONTHLY EVALUATION
THREE MONTH DATA AND AVERAGE CONCENTRATIONS

PERCHLORATE

Well Name	Sample Date	Sample Result	75% of PAL	PAL
Gage29-2	3/1/00	36	13.5	18
Average 1/1/00 - 3/31/00*		**36**		
Gage92-1	1/3/00	24	13.5	18
Gage92-1	1/12/00	14	13.5	18
Gage92-1	3/16/00	16	13.5	18
Average 1/1/00 - 3/31/00*		**18**		
COLL Mountain View #2	1/4/00	40	13.5	18
COLL Mountain View #2	2/1/00	44	13.5	18
COLL Mountain View #2	2/15/00	46	13.5	18
COLL Mountain View #2	3/1/00	44	13.5	18
COLL Mountain View #2	3/16/00	46	13.5	18
Average 1/1/00 - 3/31/00*		**44**		

TRICHLOROETHENE

Well Name	Sample Date	Sample Result	2/5 of MCL	MCL
Gage 29-2	3/1/00	4.8	2	5
Average 1/1/00 - 3/31/00*		**4.8**		

Notes:

* Well sometimes off-line between 10/1/99 - 12/31/99

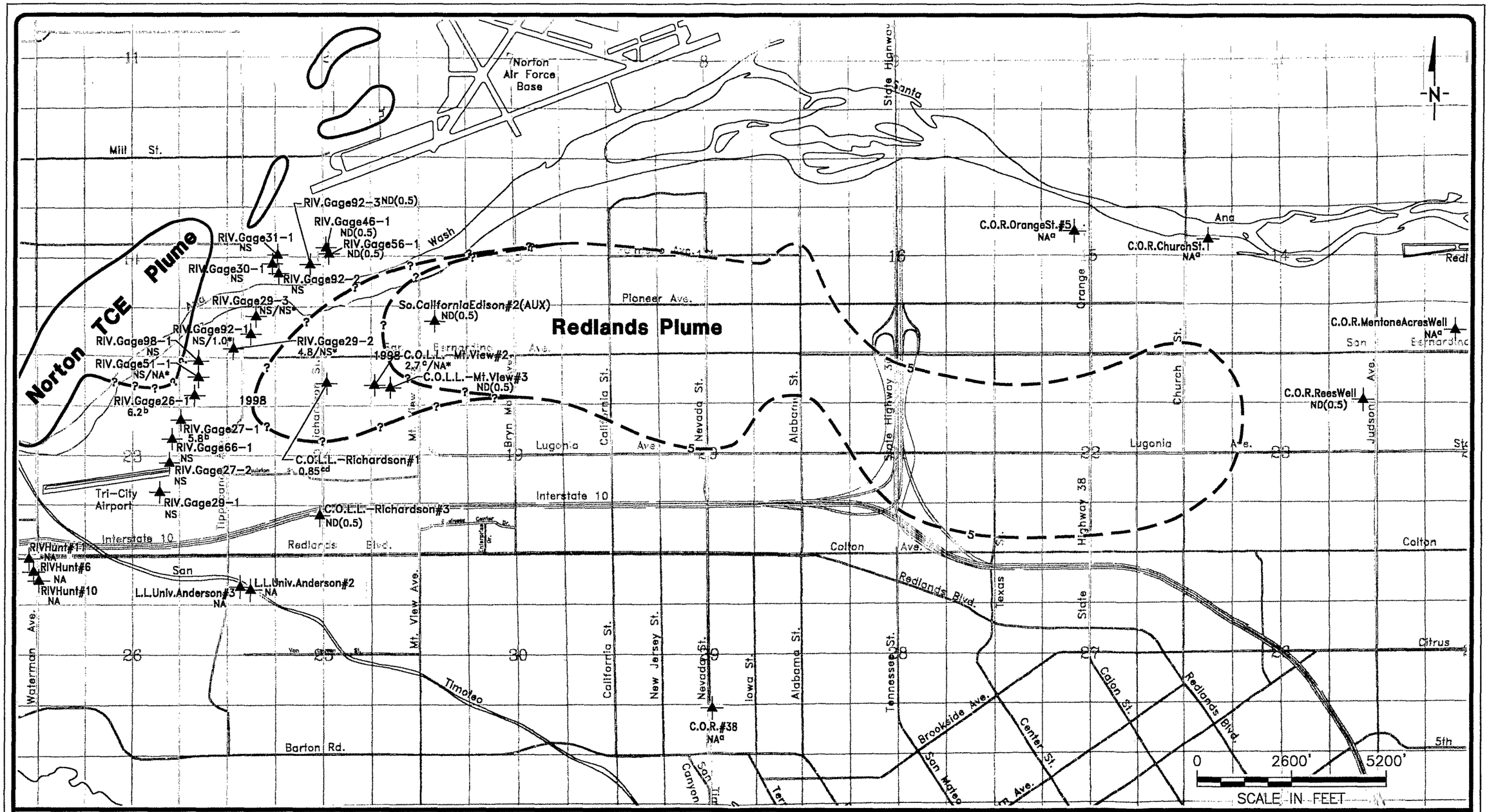
Gage 29-3 was offline during all sampling events between 10/1/99 - 12/31/99

All concentrations are micrograms per liter.

MCL = Maximum Contaminant Level

PAL = Provisional Action Level for perchlorate

FIGURES



EXPLANATION

- Wells Currently Sampled Under the Existing WSCP Sampling Program
- 2.7c TCE Results (µg\L)
  - a Quarterly Sampling Results
  - b Well Currently Being Treated for TCE
  - c Water Purged to Waste and not Into System
- 5 — Approximate TCE Plume Location 5 µg\L (1998 Interpretation of Redlands Plume)
- 5 — Approximate TCE Plume Location 5 µg/L (Earth Tech June 1999 Interpretation of Norton AFB Plume)
- 1998 — Project 5 µg\L TCE Contour in Hydrostratigraphic Unit 2
- 1998 — Project 5 µg\L TCE Contour in Hydrostratigraphic Unit 4

- ND(0.5) Not Detected at Indicated Detection Limit
- NS Not Sampled
- NA Not Analyzed
- * Twice-Monthly Sampling Results
- d Concentration in Well is a Result of Cross Flow Between Hydrostratigraphic Units

- ND(0.5) C.O.L.L. Mountain View Blend at Lawton
- NS C.O.L.L. Richardson Blend
- ND(0.5) Riv. Iowa Booster (Waterman)
- ND(0.5) Riv. Gage Delivery (Gage)
- ND(0.5) Riv. 7th + Chicago (Reservoir)
- NA Gage Arlington

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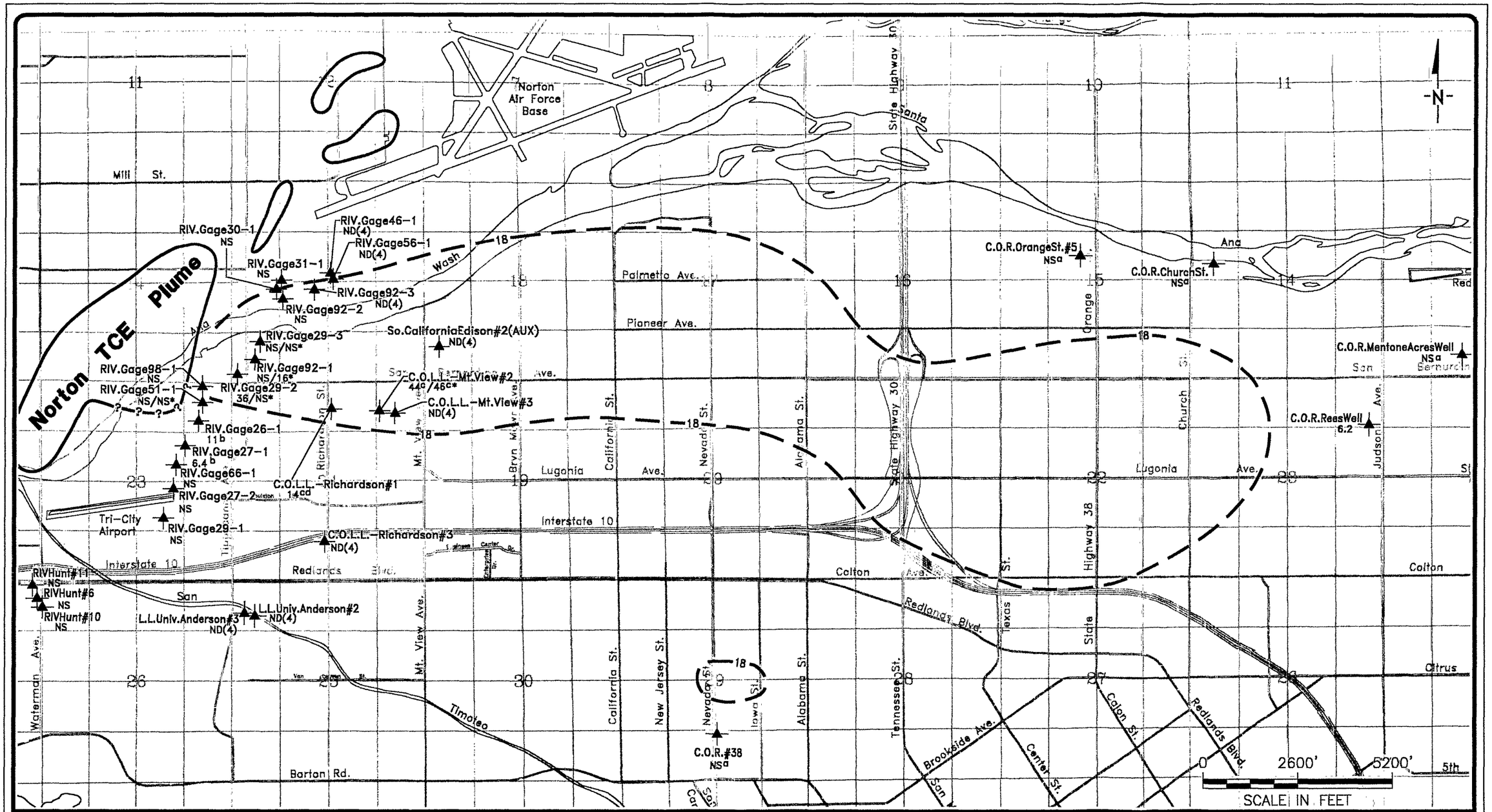
TITLE: WSCP Production Well Sampling Program
TCE Data Results March 2000

LOCATION: LOCKHEED MARTIN
REDLANDS, CALIFORNIA

HSI GEOTRANS
A TETRA TECH COMPANY

CHECKED:	Tom Titus
DRAFTED:	Hector Magaña
PROJ.:	C541-101
DATE:	04/12/00

FIGURE: 1



EXPLANATION

- Wells Currently Sampled Under the Existing WSCP Sampling Program
- —18— Approximate 18 µg/L Perchlorate Plume Location (1998 interpretation)
- —5— Approximate TCE Plume Location 5 µg/L (*Earth Tech June 1999 Interpretation of Norton AFB Plume*)
- * Twice-Monthly Sampling Results

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46c	Perchlorate (µg/L) Results
ND(4)	Not Detected at Indicated Detection Limit
NS	Not Sampled
a	Quarterly Sampling Results
b	Well Currently Being Treated for TCE
c	Water Purged to Waste and not into System
d	Concentration in Well is a Result of Cross Flow Between Hydrostratigraphic Units

ND(4)	C.O.L.L. Mountain View Blend – Lawton
NS	C.O.L.L. Richardson Blend
ND(4)	Riv. Iowa Booster (Waterman)
4.8	Riv. Gage Delivery (Gage)
ND(4)	Riv. 7th + Chicago (Reservoir)
NS	Gage Arlington

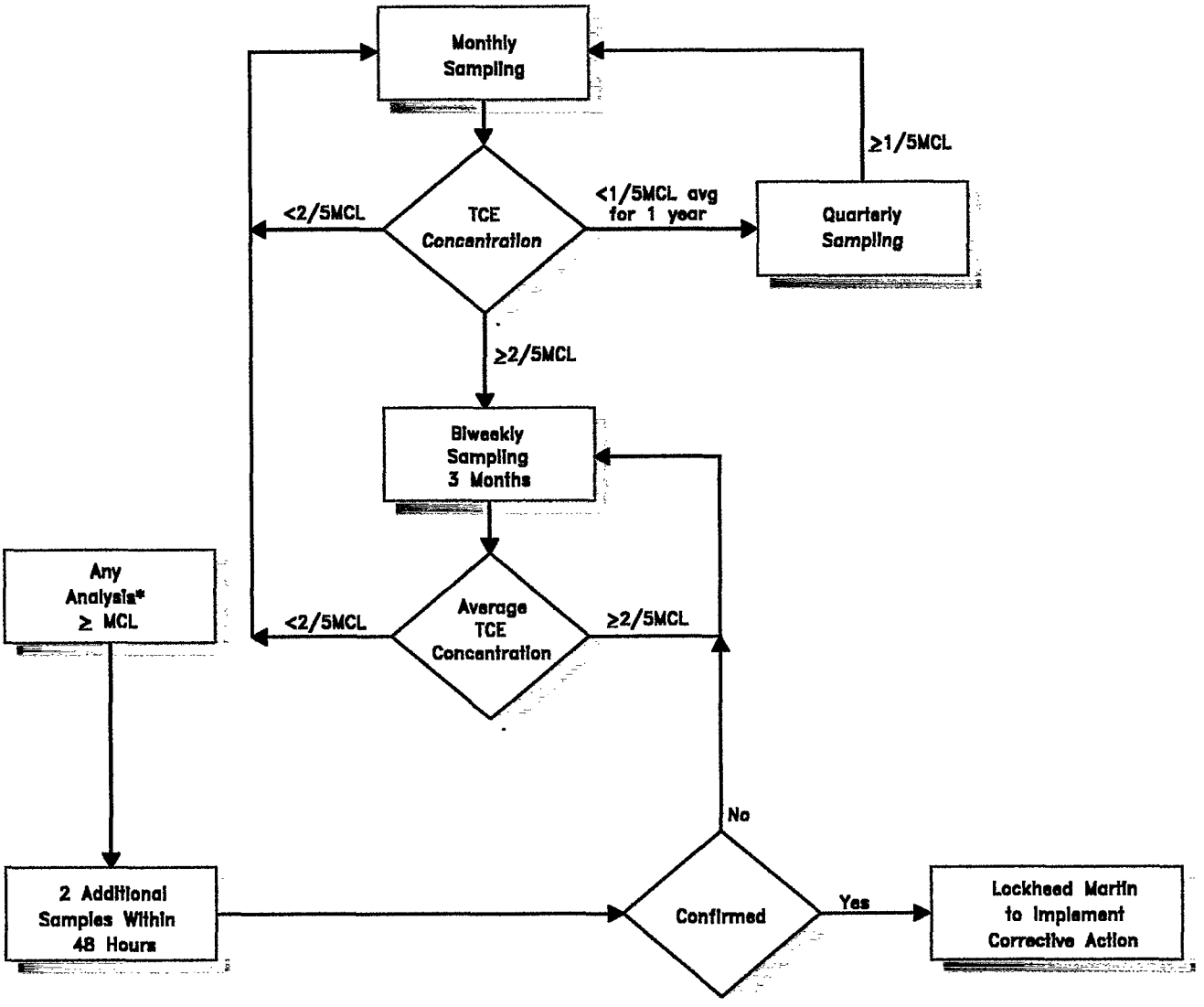
TITLE: WSCP Production Well Sampling Program
Perchlorate Data Results March 2000

LOCATION: LOCKHEED MARTIN
REDLANDS, CALIFORNIA

HSI GEOTRANS
A TETRA TECH COMPANY

CHECKED:	Tom Titus
DRAFTED:	Hector Magaña
PROJ.:	C541-101
DATE:	04/12/00

FIGURE: 2



Footnote:

* If, at a specific well, blending is occurring to provide acceptable water for compounds other than TCE, then no corrective action may be necessary as long as the concentration of TCE is less than 5.0 µg/L in the finished water.

TCE MCL = 5 µg/L (California Regulations, Title 22, Division 4, Chapter 15, Section 64444)

TITLE: Decision Matrix for Sampling of Production Wells for TCE from the Crafton–Redlands Plume

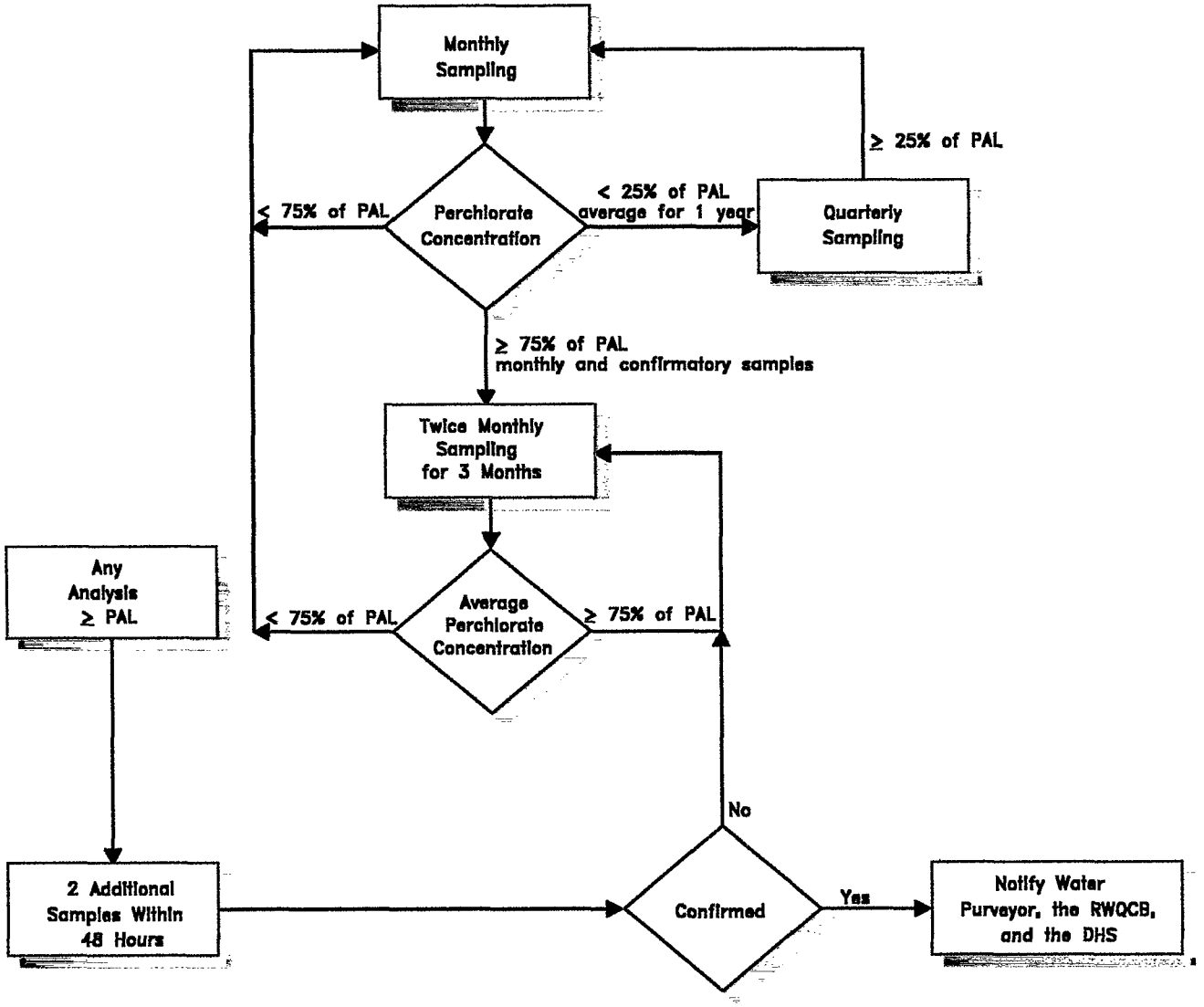
LOCATION: LOCKHEED MARTIN REDLANDS, CALIFORNIA

HSI GEOTRANS A TETRA TECH COMPANY

CHECKED:	Ron Bruns
DRAFTED:	Hector Magaña
PROJ.:	C948–101
DATE:	09/25/98

FIGURE: 3

M:\lockheed\WSCP\dm–prod3.dwg



Footnote:
Perchlorate Provisional Action Level (PAL) = 18 µg/L (California Department of Health Services, May 1997)

TITLE:	Decision Matrix for Sampling Production Wells for Perchlorate
LOCATION:	LOCKHEED MARTIN REDLANDS, CALIFORNIA
HSI GEOTRANS A TETRA TECH COMPANY	
CHECKED:	Ron Bruns
DRAFTED:	Hector Magaña
PROJ.:	C948-101
DATE:	09/25/98
FIGURE:	4

M:\lockheed\WSCP\dmCl04a.dwg

ATTACHMENT A

GEOLIS FIELD FORMS

ATTACHMENT A

GEOLIS FIELD FORMS
(Available Upon Request)

ATTACHMENT B

CHAIN-OF-CUSTODY RECORDS AND LABORATORY DATA SHEETS QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION

ATTACHMENT B

CHAIN-OF-CUSTODY RECORDS AND
LABORATORY DATA SHEETS AND LEVEL III MODIFIED
QUALITY ASSURANCE/QUALITY CONTROL DOCUMENTATION
(Available Upon Request)